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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,167	11/26/2001	Clarke V. Greene	100.361US01	9359

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EXAMINER

VU, NGOC K

ART UNIT PAPER NUMBER

2611

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/995,167

Applicant(s)

GREENE ET AL.

Examiner

Ngoc K. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-7 and 16-34, drawn to cable modem termination system, classified in class 725, subclass 111.
  - II. Claims 8-15, drawn to directional coupler, classified in class 725, subclass 127.
  - III. Claims ~~3~~1-40, drawn to first and second modes in communication with primary CMTS transceiver and backup CMTS transceiver, respectively, classified in class 725, subclass 117.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention group I has separate utility such as CMTS including at least two primary transceivers coupled to directional couplers, and one backup transceiver. Invention group II has separate utility such as directional coupler comprising three ports. Invention group III has separate utility such as communicating with primary CMTS transceiver in a first mode and communicating with backup CMTS transceiver in a second mode. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Scott Lundberg on March 18, 2003 a provisional election was made without traverse to prosecute the invention of group III, claims 31-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-7, 16-34 and 8-15 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 32, 33, 39 and 40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation of testing the backup CMTS transceiver during the first operation mode in claims 32, 33, 39 and 40 is not described in the specification. In fact, the specification discloses paragraphs [0036] at page 10 and paragraph [0043] at page 12. These paragraphs only disclose testing a backup CMTS transceiver without interrupting a

primary CMTS transceiver and switching to the backup CMTS transceiver when the primary CMTS transceiver failed. There is no disclosure of testing the backup CMTS transceiver during the first operation mode. Appropriated correction is requested.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 35-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term of a single directional coupler is defined at lines 6-7 of claim 35, meanwhile the term of a plurality of directional coupler is recited at line 13 of claim 35. Thus, the term "the directional couplers" at line 13 is indefinite. Appropriated correction is requested. For examination purpose, Examiner assumes claim 35 recites a single directional coupler with respect to the defined term "a directional coupler".

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 31-35, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unger et al. (US 6,230,326 B1).

Regarding claim 31, Unger discloses a method of providing redundancy in a cable modem termination system (CMTS) comprising: passing communications through a directional coupler (304, 305) to a primary CMTS receiver (302A-302C) during a first operation mode

(normal operation mode); and passing the communications through the directional coupler to a backup CMTS receiver (307) during a second operation mode (failure mode) (receiver 307 may act as backup receiver in the event of a failure of any of receivers 302A-C; see col. 4, lines 1-36 and figure 3). Unger does not disclose primary and backup transceivers. Official Notice is taken that it is well known in the communication system including a transceiver for handling both functions of transmitting and receiving data. Therefore, it would have been obvious to one of ordinary skill in the art to modify Unger by including the transceiver components for saving spaces in the CMTS to handle both functions of transmitting and receiving data.

Regarding claims 32 and 33, Unger does not disclose testing the backup CMTS transceiver during the first operation mode without disturbing the communications and removing the backup CMTS transceiver from the CMTS, respectively. Official Notice is taken that testing the backup device during the normal operation mode is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Unger by testing the backup device during the normal operation mode in order to ensure the backup receiver works properly.

Regarding claim 34, Unger discloses entering the second operation mode upon detecting a failure of the primary CMTS receiver (see col. 4, lines 30-32).

Regarding claim 35, Unger discloses a method of operating a cable modem terminal system (CMTS), comprising: communicating with one or more primary CMTS receivers (302A-C) across a primary signal path during a first operation mode (normal operation mode), wherein each primary CMTS receiver has one or more upstream communication ports for communication with subscriber equipment (cable modem) and one or more downstream communication ports for communication with a head end (101), and wherein a directional coupler is connected between each upstream communication port and the subscriber equipment and between each downstream communication port and the head end (the CMTS

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communicates with the CMs for transmission information over an upstream channel and the CMTS communicates with the provisioning system over a secure communication channel) (see figures 1 and 3; col. 3, lines 9-14; col. 1, lines 13-16); detecting a failure of one of the primary CMTS receiver; and entering a second operation mode (failure mode) wherein communication with the failed primary CMTS receiver is routed through a backup CMTS receiver (307) through the directional coupler associated with the failed primary CMTS receiver (receiver 307 may act as backup receiver in the event of a failure of any of receivers 302A-C) (see col. 4, lines 1-36). Unger does not disclose primary and backup transceivers. Official Notice is taken that it is well known in the communication system including a transceiver for handling both functions of transmitting and receiving data. Therefore, it would have been obvious to one of ordinary skill in the art to modify Unger by including the transceiver components for saving spaces in the CMTS to handle both functions of transmitting and receiving data.

Regarding claims 39 and 40, Unger does not disclose testing the backup CMTS transceiver during the first operation mode without disturbing the communications and removing the backup CMTS transceiver from the CMTS, respectively. Official Notice is taken that testing the backup device during the normal operation mode is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Unger by testing the backup device during the normal operation mode in order to ensure the backup receiver works properly.

13. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unger et al. (US 6,230,326 B1) in view of Parsons (US 3,999,171 A).

Regarding claims 36-38, Unger does not disclose amplifying based on the detected signal level to create the signal with near unity gain during the second operation mode. However, Parsons discloses the gain of amplifier is adjusted to maintain the gain of the system at unity based on a control signal (see abstract and col. 2, lines 43-49). It would have been

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obvious to one of ordinary skill in the art to modify Unger by including adjusting the gain of amplifier at unity based on a control signal to compensate for signal loss.

**Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bisdikian et al (US 6,223,225 B1) discloses dynamically adjustable hybrid two-way networks wherein PSTN as a back-up whenever upstream or downstream connectivity between a cable modem and the CATV head end is severed.


Baran (US 5,926,479) discloses a multiple protocol personal communications network system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc K. Vu whose telephone number is 703-306-5976. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

NV  
March 20, 2003

  
ANDREW FAILE  
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